



## Course Overview

Our **6-Week SQL for Data Analysis** Program is designed to develop your analytical skills using SQL. Each module combines theoretical concepts with practical applications, focusing on essential SQL tools for data analysis. You'll gain hands-on experience with real-world datasets, performing data cleaning, querying, and aggregation, culminating in a final project to solidify your learning.



## Course Modules



### Module 1: Introduction to SQL and Databases

**Duration:** 1 week

**Topics:**

- Introduction to databases and SQL
- Basic queries: SELECT, FROM, WHERE
- Filtering and sorting: ORDER BY, LIMIT

**Hands-on Exercises**

- Connect to a sample database (e.g., Parch & Posey)
- Write basic SELECT queries to retrieve specific data

**Outcomes:** Students will understand relational databases and write simple queries.



### Module 2: Filtering, Sorting, and Aggregating Data

**Duration:** 1 week

**Topics:**

- Aggregate functions: COUNT, SUM, AVG, MIN, MAX
- Grouping with GROUP BY and filtering groups with HAVING

**Hands-on Exercises**

- Analyze sales by filtering and grouping data
- Generate summary statistics for datasets

**Outcomes:** Students will retrieve, sort, and summarize data effectively.



### Module 3: Joining Tables and Subqueries

**Duration:** 1 week

**Topics:**

- Table relationships and JOIN types (INNER, LEFT, RIGHT)
- Combining data from multiple table

**Hands-on Exercises**

- Write queries that join customer, orders, and product tables
- Use subqueries to find top-performing regions or sales agents

**Outcomes:** Students will merge datasets and write modular, nested queries.



### Module 4: Data Cleaning and Advanced SQL Concepts

**Duration:** 1 week


**Topics:**

- Handling NULL values, string functions, and data type conversions
- Subqueries and Common Table Expressions (CTEs)


**Hands-on Exercises**


- Clean and format raw data for analysis
- Apply window functions to calculate rankings or cumulative totals

**Outcomes:** Students will clean datasets and apply advanced SQL techniques.




### Module 5: Temporary Tables and Optimizing Queries


 **Duration:** 1 week

 **Topics:**


- Temporary tables, indexing, and query plans
- Writing efficient queries for large datasets

 **Hands-on Exercises**


- Write reusable queries with CTEs and temporary tables
- Optimize queries for large datasets


 **Outcomes:**

Students will write efficient, scalable SQL queries for large datasets.




### Module 6: Capstone Project and Review


 **Duration:** 1 week

 **Topics:**

- Analyze a dataset (e.g., e-commerce or HR data) using SQL
- Present insights in a summary report

 **Hands-on Exercises**

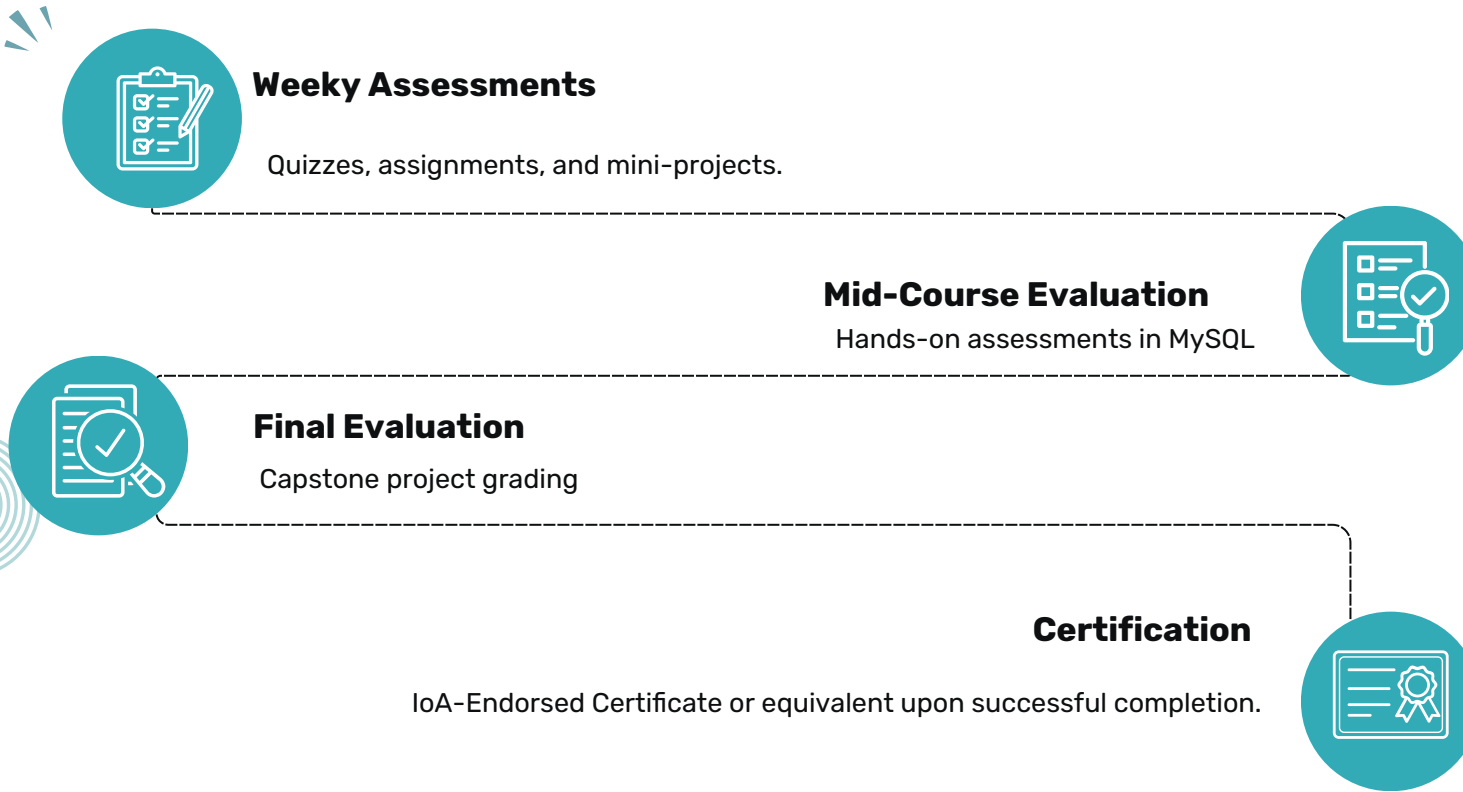
- Design and execute a full SQL analysis workflow
- Write a report summarizing insights and recommendations

 **Outcomes:**

Students will apply their SQL knowledge to a real-world project and demonstrate proficiency.



## Assessment and Certification



This 6-week program ensures a gradual build-up of skills, with ample time for practice and mastery.



## Tools For SQL For Data Analysis



## Recognized and Accredited by

